REMARKS/ARGUMENTS

Claims 27-50 were pending and were examined. The claims have been amended, canceled, and new claims added as noted above. Reexamination and reconsideration of the claims, as amended, are requested in view of the following remarks.

Independent claims 27 and 49, the only two remaining independent claims, were rejected as being obvious over the combination of Teirstein '995 in view of the Ponn et al. publication. Such rejections are traversed in part and overcome in part.

The Examiner relies on Teirstein '995 to teach the general proposition of introducing a blocking element to prohibit air from "flowing past the blocking element in an exhalation direction and an inhalation direction." The Examiner points specifically to Col. 2, line 64 and Col. 4, lines 45-55 as teaching such a blocking element which is released into a passageway. Applicants respectfully disagree with this characterization.

Teirstein '995 never refers to blocking a lung passage or blocking the flow of air in the body. Indeed, the word "air" is never used anywhere in the Teirstein '995 disclosure or claims. The specific teachings of Teirstein relate to treating vascular conditions, such as a patent ductus arteriosus (PDA) (Col. 1, line 25) and analogizes the balloon structure to those used in angioplasty (Col. 3, line 66 and Col. 9, line 28). Moreover, the device is specifically taught to be useful for the closure of "unwanted or unnecessary passageways within the body, such as the treatment of PDAs, a congenital defect, and at at least two places, the Teirstein disclosure suggests providing clot-inducing materials on the closure device (Col. 2, line 65 and Col. 3, lines 44-47), further suggesting a vascular rather than pulmonary use for the device.

The specific passages pointed out by the Examiner fall far short of suggesting any use in the pulmonary passages of a patient or for blocking the flow of air. At Col. 2, line 64, reference is made merely to expanding a blocking element from a small diameter to a large diameter. Col. 4, lines 45-55 again refer generally to blocking a passage with no specific reference to the pulmonary system, lungs, or air.

The Examiner further relies on the teachings of Ponn et al. to disclose the sealing of a bronchial passageway. Ponn, however, relates only to the sealing of bronchopleural fistulas. A bronchopleural fistula is an abnormal passageway between a bronchus and the pleural cavity,

where the pleural cavity is the external space surrounding the lung. Thus, a bronchopleural fistula is an opening between the inside of the lung and the exterior of the lung and, and sealing bronchopleural fistula is not in any way equivalent to sealing bronchial passageways within the lung.

Claim 27, even prior to amendment, required inserting a blocking element in a bronchial passageway of the individual. As discussed above, neither Teirstein nor Ponn teach such a step. Nonetheless, in order to even further distinguish these references, claim 27 has been amended to recite that the method is for treating an individual "having an abnormal permanent enlargement of an airspace distal to a terminal bronchiole in a lung" where a blocking element is inserted through the airways to the terminal bronchiole and released so that the blocking element "prohibits air from flowing through the terminal bronchiole and isolates the airspace ... "so that the airspace deflates over time as the air in the airspace becomes absorbed." Such claim limitations further distinguish the teachings of Teirstein and Ponn.

As emphysema is typical of such abnormal permanent enlargements, the rejection of dependent claim 41 directed at treating patients with emphysema is also of interest. Dependent claim 41 was rejected based on the combination of Teirstein and Ponn, further in view of Lefrak et al. Lefrak teaches open surgical lung volume reduction surgery where emphysema and chronic obstructive pulmonary disease (COPD) is treated by surgical resection of a diseased lung region, not sealing of bronchioles leading to diseased lung segments.

The Examiner argues that "Lefrak teaches that volume reduction surgery that improves volume occupying emphysematous lung is an effective treatment for emphysema. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the device of Teirstein to treat emphysema in order to plug nonfunctioning emphysematous lung tissue and improve elastic recoil, as taught by Lefrak, so that a non-surgical option is available to reduce lung volume (Abstract)."

Such argument fails in at least two respects. First, the present invention does not "plug nonfunctioning emphysematic lung tissue." As amply set forth in the claims and described in the specification, the present invention blocks the bronchiole which leads to the emphysematous lung tissue and does not plug the emphysematous lung tissue itself. Second, the

blocking of a bronchiole leading to a diseased lung segment leaves the tissue in place and is in no way equivalent to surgical excision of that lung region.

The amendments made to claim 27 further distinguish the teachings of Lefrak. In particular, claim 27 now sets forth that the airspace is isolated and that the airspace deflates over time as the air in the airspace becomes absorbed. Such a result follows directly from blocking the terminal bronchiole, not plugging the nonfunctioning lung tissue as, in the Examiner's view, is suggested by the combination of Teirstein, Ponn, and Lefrak.

For these reasons, Applicants believe that independent claim 27, as amended, and all claims dependent thereon, are allowable over the cited art.

Independent claim 49, the only other independent claim, has been amended similarly to claim 27 and is believed to be in condition for allowance for the reasons discussed above. Thus, it is believed that independent claim 49, as well as new dependent claim 51, are allowable over the art of record.

CONCLUSION

In view of the above amendments and remarks, Applicants respectfully request that the application be passed to issue at an early date.

If for any reason the Examiner believes that a telephone conference would in any way expedite prosecution of the subject application, the Examiner is invited to telephone the undersigned at 650-326-2400.

Respectfully submitted,

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